Navy Case No. 83,068 Inventors: Lyons et al.

## **ABSTRACT**

Increased lithium capacity of defective oxide materials and methods for preparation are described herein. Point defects may be introduced into a metal oxide to increase its lithium ion capacity. Defective metal oxides can be prepared by heating the metal oxide under  $O_2/H_2O$  at elevated temperatures. These increased lithium capacity metal oxides may be suitable for use as high specific energy cathodes in lithium metal and lithium ion batteries.